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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/933,496	08/20/2001	Norman C. Brackett	71850/55891	5921

7590 02/06/2003

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EXAMINER

LE, DANG D

ART UNIT PAPER NUMBER

2834

DATE MAILED: 02/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/933,496

Applicant(s)

BRACKETT, NORMAN C.

Examiner

Dang D Le

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 and 39-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-35 and 49-64 is/are allowed.
- 6) ☒ Claim(s) 1-17 and 39-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. Claims 1 and 39 are objected to because of the following informalities:
 - Claim 1, line 6, delete "more".
 - Claim 1, line 6, insert -- rigid bumpers -- before "having".
 - Claim 39 shows problems similar to claim 1 above. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 11, and 39-43 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato.

Regarding claim 1, Kato shows a damping system (Figure 13) for an evacuated energy storage device, said device having a rotor assembly (106) that is rotatably supported and guided by a bearing assembly (B1), comprising a rolling element

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substantially confined between an inner and an outer race, and a stator assembly (107),
the system comprising:

- One or more flexible dampers (204), each having a first stiffness; and
- A plurality of more rigid bumpers (202), each of said plurality having a second stiffness, wherein said second stiffness is greater than said first stiffness (made of rubber).

Regarding claim 39, it is noted that Kato also shows an evacuated energy storage device, said device (Figure 13 comprising:

- A bearing assembly; said bearing assembly further comprising:
 - An inner race,
 - An outer race, and
 - A rolling element, wherein said rolling element is substantially confined between said inner and said outer race;
- A rotor assembly (106) that is rotatably supported and guided by said bearing assembly;
- A stator assembly (107); and
- A dual stiffness damping system, the system comprising:
 - One or more flexible dampers (204), each having a first stiffness; and
 - A plurality of more rigid bumpers (202), each of said plurality having a second stiffness, wherein said second stiffness is greater than said first stiffness (made of rubber).

Regarding claims 2 and 40, it is noted that Kato also shows the one or more flexible dampers (204) comprising a mesh damper.

Regarding claims 3 and 41, Kato also shows one or more flexible dampers comprising an elastomeric damper.

Regarding claims 4 and 42, it is noted that Kato also shows the elastomeric damper being made of silicon rubber.

Regarding claims 5 and 43, it is noted that Kato also shows said rotor assembly and said stator assembly configured and arranged so as to be separated by a first clearance at substantially all locations except in proximity of the outer race of the bearing assembly, whereat said outer race of said bearing assembly is configured and arranged to be separated from one of said plurality of rigid bumpers by a second clearance, to allow relative displacement of said stator assembly with respect to said rotor assembly.

Regarding claim 11, it is noted that Kato also shows said plurality of more rigid bumpers configured and arranged so as to substantially limit further relative displacement between the rotor assembly and stator assembly by frictionally engaging the outer race of the bearing assembly after an initial, first relative displacement equal in magnitude to a second clearance that separates said outer race of said bearing assembly from said plurality of more rigid bumpers.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6-10, 12-17 and 44-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato.

Regarding claims 6-9, 12, 13, 44 and 45, Kato shows all of the limitations of the claimed invention except for the dimensions of the first and second clearance.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the first clearance about 13 to 17 mils or 15 mils and the second clearance about 8 to 12 mils or 10 mils, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claims 10 and 46, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make said plurality of more rigid bumpers from at least one of aluminum, metal, alloys, carbon, carbon-carbon composites, and carbon fiber composite materials.

Regarding claims 14-17, 47 and 48, Kato shows all of the limitations of the claimed invention except for the dimensions of the first stiffness and the second stiffness.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the first stiffness about 500 lb/in to about 4000 lb/in or about 1200 lb/in and the second stiffness about 50,000 lb/in to about 250,000 lb/in or about 200,000 lb/in, since it has been held that discovering an optimum value of

a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Allowable Subject Matter

7. Claims 18-35 and 49-64 are allowed.
8. The following is a statement of reasons for the indication of allowable subject matter: the record of prior art does not show a self-contained bearing assembly system for an evacuated energy storage device comprising an upper damper grounding plate, a lower damper grounding plate, and circumferential mounting plate with one or more flexible dampers, wherein an inner periphery of said one or more flexible dampers is in tight interference fit with said outer race of said bearing assembly and an outer periphery of said one or more flexible dampers is securely and removably attached to said circumferential mounting plate; and a plurality of more rigid bumpers, wherein at least one of said plurality of more rigid bumpers is configured and arranged on said upper damper grounding plate so as to be disposed in proximity of said outer race of said bearing assembly and one or more of said plurality of more rigid bumpers is configured and arranged on said lower damper grounding plate so as to be disposed in proximity of said outer race of said bearing assembly as shown in claims 18 and 49.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information on How to Contact USPTO

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (703) 305-0156. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

DDL
February 5, 2003

DL

